Vascular Malformation of Kidney – A Case Report
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INTRODUCTION
In duplication of renal artery it is usual for each renal segment to have its own arterial supply. Regarding ureter, most common congenital anomaly is duplication of renal ureter. It is autosomal dominant in inheritance. It is mostly found in females and is often bilateral. There are two types of duplication of ureter: complete and incomplete. In incomplete type, both ureters join together and a single ureteric opening is found. This is called “Yo – Yo” effect. In complete type, both ureters open separately. a) Weigert-Meyer’s rule: both upper pole and lower pole ureters rotate along their long axis so that upper pole is draining medially and caudally than the lower pole ureter. Lower pole ureter opens laterally and have short intravesicle course leading to vesicoureteral reflux (VUR). Lower down in the urinary bladder. In Females, the upper pole ureter is ectopic and obstructed. It drains mainly into the distal part of the external urethral sphincter and sometimes may be outside the urogenital tract. Classic symptoms is incontinence of urine with normal voiding pattern. In Males, ectopic opening is always proximal to the external urethral sphincter and so incontinence does not occur. Other positions of ectopic ureteric orifices are – Males: prostate or posterior urethra or lateral urinarian bladder. Females: Anterior urethra, vestibule or vagina. The intraluminal diameter of ureter is 1.5-2.5 mm and its length is around 30 cm. Volume of renal pelvis is around 7 ml. It is mostly found in females and is often bilateral. There are two types of duplication of ureter: complete and incomplete. In incomplete type, both ureters join together and a single ureteric opening is found. This is called “Yo – Yo” effect. In complete type, both ureters open separately.

CASE REPORT
In this case report (Figure 1) we found pair of kidney with renal vein and renal artery. Right renal artery is longer than the left renal artery and left renal vein is longer than the right renal vein. We can see the posterior aspect of inferior vena cava. Left gonadal vein and left suprarenal vein (adrenal vein) are draining into the left renal vein. Right suprarenal vein and gonadal vein are draining into inferior vena cava. Both the ureters are draining from the kidneys behind the renal artery. From anterior to posterior we get renal vein, renal artery and ureter.

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study on kidney. They found double renal artery on the left side and triple renal artery on the right side [7]. This coincides with our finding.

Turan Pestemalci, Ayfer Mavi, Yusuf Zeki Yildiz et al. bilateral triple renal arteries were noticed. On the right side, the main renal artery arose from the abdominal aorta; the first additional renal artery (ARA), supplying the upper pole of the kidney, arose from the abdominal aorta and the second ARA, supplying the lower pole of the kidney, arose from the ipsilateral common iliac artery. On the left side, the main renal artery and the aARAs (to upper and lower poles of the kidney) arose from the abdominal aorta [8]. This is according to our findings.

Ning Xiao, Bo Ge, Jianfeng Wang, huasheng Zhao, mentioned in their article that ureteric bud divides prematurely before penetrating into metanephricblastema will result in duplex ureter.

There are 2 types - complete and incomplete duplex ureter. The incidence of incomplete duplex ureter, including 3 subtypes, such as proximal, middle, and distal, depending on the location that bifid ureters join a single unit, is 3 times more than the complete [9]. This is according to our finding [10,11].

CONCLUSION

In any angiographic interventions and urosurgery, inadvertent injury to accessory renal artery as well as ureter can be prevented after getting awarded about this kind of Reno vascular anomalies.

REFERENCES